

# ***Decisions***

**1. Approve Aviation Objective Force**

**Organizational Design**

**2. Approve RAH-66 Comanche as the Multi-Role  
Reconnaissance and Attack System for the  
Objective Force**

**3. Approve the Aviation Transformation Strategy  
and the Development of an Implementation  
Plan**

# Objective Force Recon/Attack Requirements

## Required Capabilities

- Integrated C4ISR, System of Systems, for Sustained SU/SA
- Multi-Role Systems & Multi-Functional Units
- Manned/Unmanned Teaming for Recon /Attack Missions
- Armed, Manned Reconnaissance & Attack Systems for C2 Cognitive Decision-Making
- Agile, Survivable, Sustainable, Responsive Forces - Embedded in Organization and Platforms

**Comanche  
Meets  
These  
Needs!**

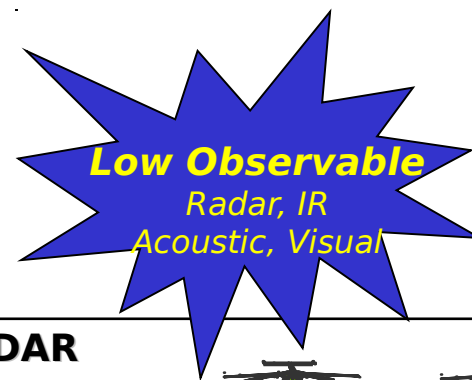
- **LETHALITY**  
Fires, Maneuver, Leadership, Force Protection  
Recon & ATK Multi-Role Units w/ Special Purpose Capabilities ✓
- **SURVIVABILITY**  
LO, Ballistic Protection, Stand-off, First Round Hit/Kill ✓
- **DEPLOYABILITY**  
Bde in 96 Hours, Div in 5 Days & 5 Div in 30 Days ✓
- **AGILITY**  
SASO - to - MTW - to - SASO C4ISR/Digitization ✓
- **SUSTAINABILITY**  
Reduce LOG Footprint & Supply Demand-Diagnostics and Fewer Maintenance Tasks ✓
- **RESPONSIVENESS**  
Highly Capable Force (Right Place/ Right Time), Joint Interoperability ✓
- **VERSATILITY**  
Operational, Multi-Functional Flexibility (Task Org), Joint Interoperability, Technology Growth

## **Comanche AoA Study**

### **Analytical underpinnings:**

- Robust 2010 Threat
- Comanche vs LBA vs KW
- SWA / NEA / EUCOM scenarios
- Troop to CORP size forces
- Reconnaissance and attack missions
- Counter-Offensive, SASO, Advanced Cover, and Defense
- ARI Force structure

# Comanche - Reconnaissance Role



**Low Observable  
Even in Attack  
Configuration!**

## RADAR

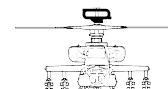
FRONT SECTOR  
10 GHZ



X



<2X



29

## IR

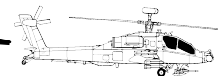
SIDE SECTOR  
SOURCE SIGNATURE  
NO SOLAR LOAD  
STINGER



X



X



3.9

## Situational Awareness

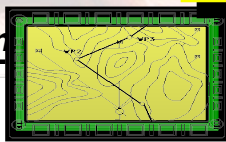
- COP - Friendly & Enemy Positions
- Constantly updated tactical graphics
- On-board correlation of duplicate targets
- SU/SA Integration w/Sensors and C2 Nodes
- UAV feed into cockpit
- 2nd Generation FLIR
- Laser / Radar warning receivers
- Chemical detectors
- Sensor fusion (PCR and PLR)

### SECURE VOICE

- VHF-FM/SINGARS
- UHF/HAVEQUICK
- VHF-AM
- HF
- SATCOM
- Simultaneous Transmit
  - 2 Voice, 1 Data
- Simultaneous Receive
  - 4 Voice, 1 Data

### SECURE DIGITAL/DATA

- IDM JVFM
- EPLRs
- LINK-16/TADIL-J

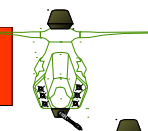


Keeps crew SA updated

## Combat Radius - Operational Deep

### Armed Recon

With main internal fuel  
6 HELLFIRE 237 km radius



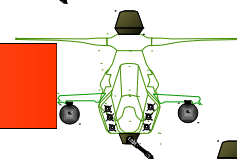
### Armed Recon

3 HELLFIRE With 1 internal aux  
348 km radius



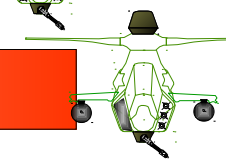
### Armed Recon

6 HELLFIRE With 2 external aux  
598 km radius



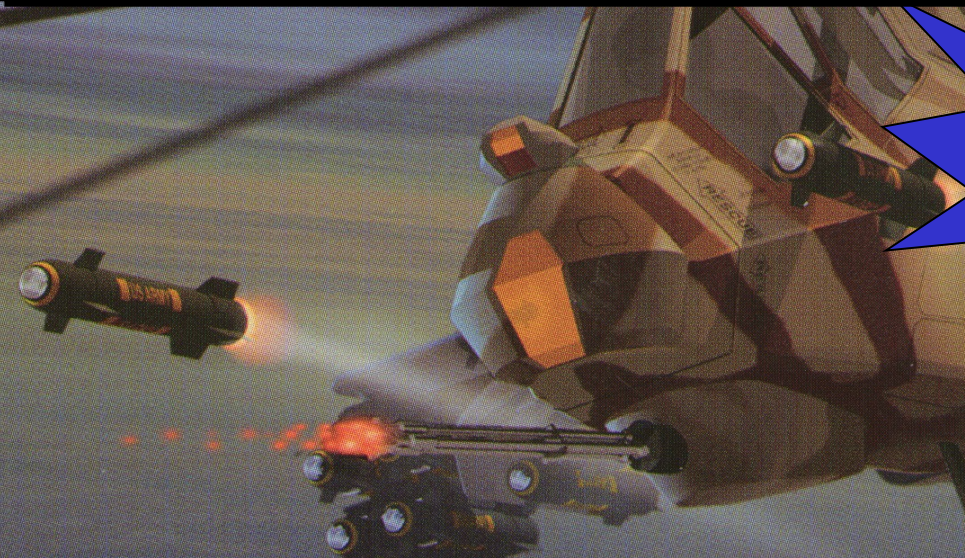
### Armed Recon

3 HELLFIRE With 2 external & 1 internal Aux  
675 km radius



15 Minute Station Time - 20 Minute VFR Reserve,  $V_{BR}$  250 km/hr

# Comanche - Attack Role



## Weapon Systems

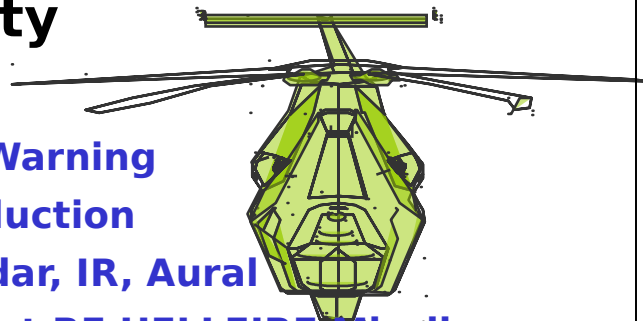
**Low Observable**

Radar, IR  
Acoustic, Visual



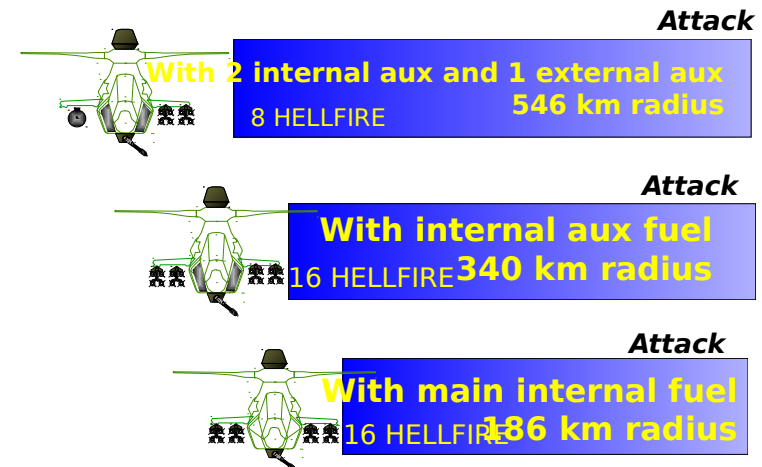
	MAX	Attack	Recon	MAX RANGE
70 MM ROCKETS	76	0	4	9000m
HELLFIRE (SAL/RF)	16	16	4	8000m
20mm Gun	500	500	320	2000m
Air-to-air missile	12	0	2	8000m

## Survivability



- Radar/Laser Warning
- Signature reduction  
Visual, Radar, IR, Aural
- Fire and Forget RF HELLFIRE Missile
- Ballistic Tolerant Components
- NBC filtered, pressurized cockpit
- Nitrogen Inerted Fuel Tanks
- Crashworthy Airframe and stroking gear/seats

## Combat Radius - Decisive & Shaping Op



15 Minute Station Time - 20 Minute VFR Reserve,  $V_{BR}$  250  
km/hr



# Comanche Milestone II AoA Results



## Final Report

### Force Effectiveness Impact

- ✓ **Allowed battlefield commanders to MORE effectively utilize the Force to shape the battlespace and provided CDR with greater time to coordinate Forces actions**
- ✓ Gave CDR the ability to seize the initiative
- ✓ Provided for more precise navigation and maneuvering
- ✓ **Force with Comanche had greater effectiveness and survivability**
- ✓ Comanche modernization potential critical to Army Aviation
- ✓ **Provided large contribution to situational awareness and common operating picture** (over alternatives)
- ✓ Provided large contribution to digital communication links to Army and Joint (over alternatives)

### Logistics Impact

- ✓ **Comanche operational availability exceeded every alternative by at least 10%**
  - ✓ MTBMA (aborts), MTBMAF (mission affecting failures), MTBEMA (essential maintenance actions) – all favored Comanche
  - ✓ **More able to achieve flying hrs requested in a high OPTEMPO situation** than any other alternative (15% more than KW, 37% more than LBA)
  - ✓ 80% fewer pieces of support equipment than KW
  - ✓ **89% fewer pieces of support equipment than LBA**
  - ✓ Reliability parameters 14-40% greater than LBA
  - ✓ Reliability parameters 1-70% greater than KW
  - ✓ Total # of maintainers reduced by 18% vs NO Comanche alternative
  - ✓ Minimal impact on training base – 12% fewer training man-days than KW
- Can RAH-66 Comanche perform successfully as the multi-role (both reconnaissance and attack) platform for the Objective Force?**

YES

## **Decision #2**

### ***RAH-66 as a Multi-Role Reconnaissance/Attack System***

- **Comanche Designed as a Multi-Role System**
- **TRAC Analysis Confirms Capability to Perform Both Missions Against Advanced Threat**
- **Increased Survivability in Both Recon and Attack Roles**
- **“Pure Fleeting” with Comanche Significantly Reduces Logistics Footprint**
- **Critical to Situational Understanding Across the Force**

***Recommendation: Approve RAH-66  
Comanche as the Multi-Role  
Reconnaissance and Attack System for  
the Objective Force***

# ***Decisions***

- 1. Approve Aviation Objective Force Organizational Design**
- 2. Approve RAH-66 Comanche as the Multi-Role Reconnaissance and Attack System for the Objective Force**
- 3. Approve the Aviation Transformation Strategy and the Development of an Implementation Plan**

# TRANSFORMATION STRATEGY



# ***Facts***

- **Risk = A Function of Speed in Organizational Change, Feasibility of Manning, Availability of Combat Systems, and Capability of Institutional Training and Logistic Systems**
- **Must Minimize Risk in the Counter-Offensive Force and in Korea**
- **Must Retain Air assault Capability in the 101st Air Assault,**  
**82<sup>nd</sup> Airborne and Light Infantry Divisions**
- **Must Resource the ARNG with AH-64/UH-60 Aircraft**
- **Must Divest Approximately 1800 Obsolete Aircraft**
- **Manning, Training and Logistics Requirements Increase During the Transition**

# ***Assumptions***

- **First Objective Force Unit Fielded is FY 2010**
- **One Attack Battalion Inactivates in FY02**
- **Production Rates for Blackhawk and Comanche in FY02-07**

**POM and EPP will Remain Unchanged Or Increase**

- **Recapitalization (Rebuild/Selective Upgrade) for Legacy**

**Aircraft will be Executed in FY 02-FY 10**

- **Reliability and Sustainability Task Force Initiatives will**

**Increase Reliability, Sustainability and**

# Warfighting Forces in Transition

## Forces:

### COUNTER-OFFENSIVE



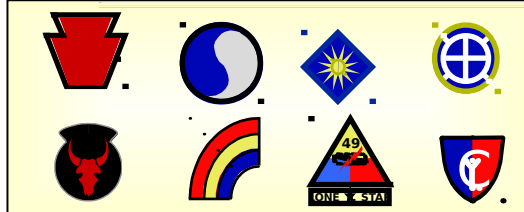
### CONTAINMENT



### CONTINGENCY



### NG DIVISIONS



### IDIV

## The Challenge:

Meet the Operational Requirements of the Legacy Force and Interim Force while moving, as rapidly as Possible, to an Objective Force Capability.

*Develop Future Full Spectrum, Multi-functional Capabilities*

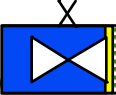
*Objective Force*

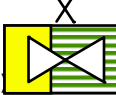
*Mitigate Risk in Implementation Strategy*

*Sustain Warfighting Capability*

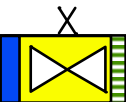
# CURRENT AVIATION FORCE

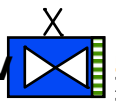
## THEATERS


**NEA** (8<sup>th</sup>ARMY)  34 UH-60  
32 CH-47  
32 Fixed Wing

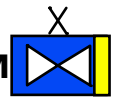
**SWA** (3<sup>rd</sup>ARMY)  21 UH-60  
32 CH-47  
32 Fixed Wing


## COUNTER OFFENSIVE FORCE

**III**  66 AH-64  
78 UH-60  
64 CH-47  
32 LUH


**1CAV**  16 OH-58D  
24 AH-64  
24 UH-60  
3 EH-60


**4/3**  24 OH-58D  
16 AH-64  
15 UH-60  
4 EH-60

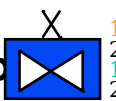
**3ID(M)**  16 OH-58D  
24 AH-64  
18 AH-64 (NG)  
24 UH-60  
4 EH-60

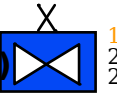
**4ID(M)**  16 OH-58D  
24 AH-64  
24 UH-60  
4 EH-60


## CONTAINMENT FORCE

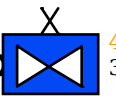
**V**  48 AH-64  
82 UH-60  
48 CH-47  
32 LUH

**4/278**  24 AH-1  
12 UH-60  
3 EH-60

**1AD**  16 OH-58D  
24 AH-64  
18 AH-64 (USAR)  
24 UH-60  
4 EH-60

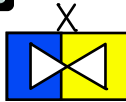
**1ID(M)**  16 OH-58D  
24 AH-64  
24 UH-60  
4 EH-60

**2ID**  16 OH-58D  
24 AH-64  
38 UH-60  
4 EH-60

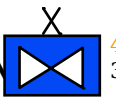
**25ID**  40 OH-58D  
38 UH-60  
4 EH-60

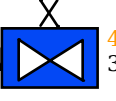
## CONTINGENCY FORCE

**I**  54 AH-64  
81 UH-60  
64 CH-47  
32 LUH

**XVIII**  66 AH-64  
86 UH-60  
64 CH-47  
32 LUH

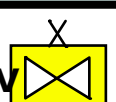
**4/2**  32 OH-58D  
15 UH-60

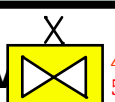
**10MTN**  40 OH-58D  
38 UH-60  
5 EH-60

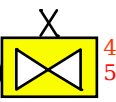
**82ABN**  48 OH-58D  
38 UH-60  
4 EH-60

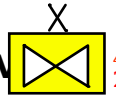
**101AA**  32 OH-58D  
72 AH-64  
114 UH-60  
48 CH-47  
4 EH-60

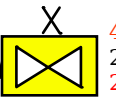
## NATIONAL GUARD DIVISIONS

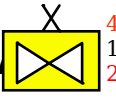
**28DIV**  40 AH-1  
24 UH-1

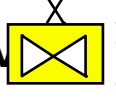
**34DIV**  40 AH-1  
53 UH-1

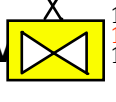
**38DIV**  40 AH-1  
53 UH-1  
3 UH-60

**42DIV**  40 AH-1  
24 UH-1

**29DIV**  40 AH-1  
22 UH-60  
23 UH-1

**35DIV**  40 AH-1  
15 UH-60  
23 UH-1  
1 EH-60

**40DIV**  19 AH-64  
16 AH-1  
6 UH-60  
16 UH-1  
2 EH-60

**49DIV**  19 AH-64  
16 AH-1  
17 UH-60  
8 UH-1  
3 EH-60

A Legacy Force  
Equipped with  
Aging/Obsolete Aircraft

OH-58D	312
AH-64	540
AH-1	296
UH-60	896
UH-1	224
CH-47	355
EH-60	53
LUH/UH-1	128
FW	96

Must be  
Recapped,  
Modernized and  
Re-Organized  
for the Future

 Active  
 National Guard  
 Reserve

# ***Transformation Strategy***

- **Deliberate Approach in Transition**
- **First to Fight Equipped with Most Capable Systems**
- **Prioritization of Resources and Combat Systems to Sustain Warfight**
- **Selected Units are Resourced at Less than Full Requirement**
- **Decrease Risk and Increase Relevancy of National Guard Divisions by                      Resourcing With Modernized Aircraft**
- **Reserve Units Resourced and Reorganized ICW Mission Alignment**
- **Continue Leader Development, Training, Logistics System, and**

**Objective Force Capabilities**  
***Bridge to Future Must Sustain Warfight***

# ***Transformation Strategy***

## **Counter-Offensive Force:**

- Retain ARI, Greater Lethality; Transitions to Objective Force Late
- Full Spectrum Capable by Task Organizing - Optimized for MTW

## **Contingency Force:**

- Sustain Current Capability in 101<sup>st</sup> Air Assault Division
- Retain 10<sup>th</sup> MTN and 82<sup>nd</sup> ABN in ARI Design Until RAH-66 Fielding
- Modernize 82<sup>nd</sup> ABN to RAH-66 Early
- 2 ACR will Change Based on On-Going Study, Fielded with Legacy Systems Until Comanche is Available

## **Containment Force:**

- Early Transition to Multi-Functional Units with Legacy Equipment in Div
- Heavy Division w/LBA; Light Division w/ KW
- 2ID Retains ARI Organization
- Full Spectrum Capable, Corps Augmentation for Sustained MTW

## **National Guard Divisions:**

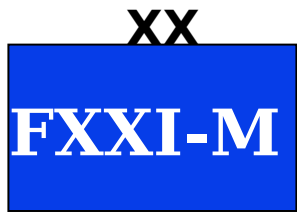
- Multi-Functional Units with Legacy Equipment at Reduced Numbers
- Full Spectrum Capable

## **Training Base:**

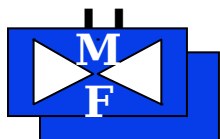
- Transition to Flight School XXI
- Divest, Sustain and Selective Upgrade of Capabilities



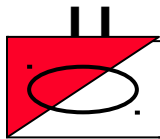
# Counter Offensive Force Strategy Framework



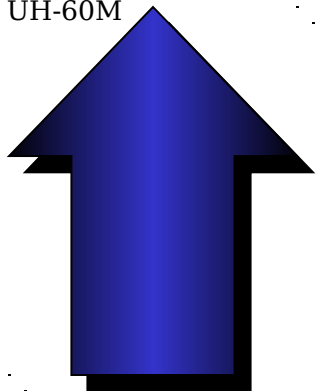
Objective



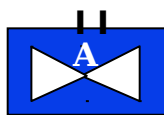
16 RAH-66  
20 UH-60M



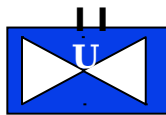
12 RAH-66



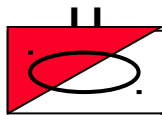
Current/Interim



3x8 AH-64



4x8 UH-60



2x8 OH-58D

Org:  
Recon:  
Attack:

Lift:  
C2:

- Optimized for MTW Counter Attack
- Can Support Regional Engagement (SASO) in Austere Conditions
- Less Maneuver Units (-9 Company Teams) - FXXI Design
- Decisive Operations (Deep Ops, Mutual Support, Maneuver Support, AASLT)
- Force of Decision until Objective Force Concept Matures
- Digitized (FDD By FY 04; FDC By FY 05)
- Deploy By Sea and Air
- Last To Transform to Objective Force (Period)

• Retain ARI, Greater Lethality; Transitions to Objective Force Late

• Full Spectrum Capable by Task Organizing - Optimized

• Sustain OH-58D (KW Not Digitized) - Accept Risk Until Replacement

• Follow On is RAH-66 & THAV - Must Convert O/A FY 12

• Upgrade to AH-64D - Apply Recap As Soon As Possible

• 8 Per Company to Enable Deep Ops, Maneuver Support, Security, Assured Lethality, Survivability

• UH-60L (Recap) Early Conversion to UH-60M for Digitization

• A2C2S Command and Control System; 4 per Brigade

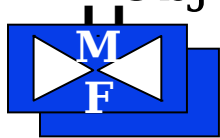
# Containment Force Strategy

## Framework

XX



Objective



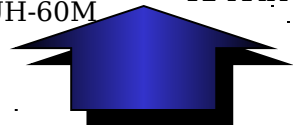
16 RAH-66  
20 UH-60M



12 RAH-66



2 UH-60



Transition

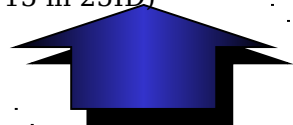


10 AH-64  
8 OH-58D  
\*10 UH-60  
(\*15 in 25ID)

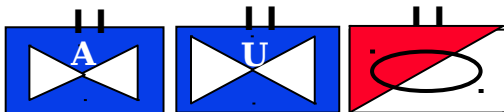


8 OH-58D

2ID Retains ARI



Current



3x8 AH-64\*3x8 UH-602x8 OH-58D  
(\*2X15 UH-60 in 2ID/25ID)

- Regional Engagement (SASO) in Austere Conditions
- Optimized for Defense
- Less Maneuver Units (-9 Company Teams) - LCD/FXXI
- Decisive Operations(Attack, Deep Ops, Maneuver Support, AASLT)
- Larger AOR - Contains Fight Until Follow-On Early

Deployers Arrive

Strategy

Org:

- Early Transition to Multi-Functional Units with Legacy Equipment in Div
- Heavy Division w/LBA; Light Division w/ KW
- 2ID Retains ARI Organization

Recon:

- Sustain OH-58D (not digitized) Follow-On is RAH-66 & 2ID

Attack:

- Upgrade to AH-64D - 20 Per Battalion AC - 16 Per Battalion RC
- Assume Risk (Reduction of 4 AH-64 per Division)

Lift:

- Second priority for UH-60M (Recap) for Digitization - Variety of Lift Missions
- Retain Bn Asslt Capability in 25ID/2ID in Interim W/2 x 15 UH-60 Companies

C2:

- A2C2S Command and Control System

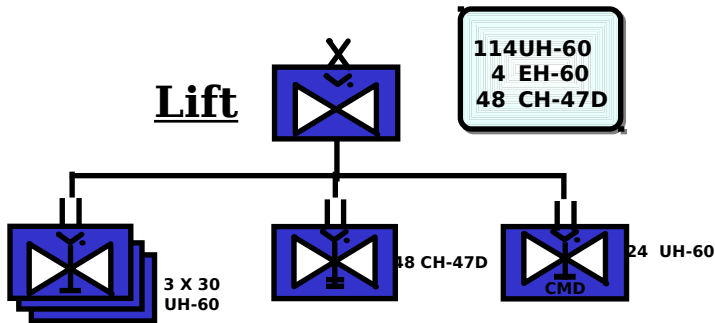
# Contingency Strategy Summary

## Framework

AIR ASSAULT  
DIVISION



Lift



- Tailored Counter Offensive/Containment Force

- Mission - Quickly Resolve Conflict or Contain Threat

- for Follow-On Counter Offensive Ops
- Decisive Operations (Attack, Deep Ops, Maneuver

- Support, AASLT) - Specialized Capabilities

- Digitized C2 Nodes

- Deploys By Air/Sea

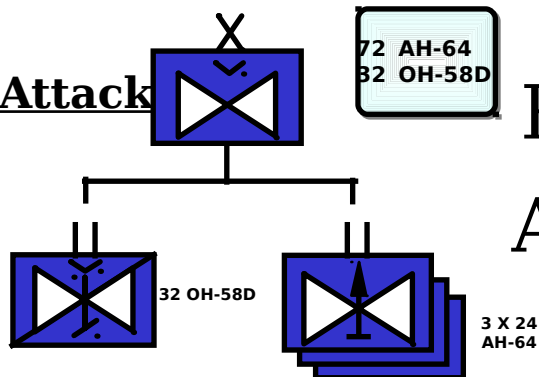
- Optimized for MTW

- **Sustain Current Capability in Air Assault Division**

- **Retains Due Air Assault Capability**

Org

Attack



Recon

- Sustain OH-58D (Not Digitized)

- Follow-On is RAH-66 & TUAV

Attack

- Upgrade to AH-64D with Recap

- Deep Ops, Air Assault Security, Security, Assured Lethality, Survivability

Lift:

- UH-60M (Recap) for Digitization - Air Assault, Air Movement

C2:

- CH-47F (Recap) Air Assault, Air Movement

- A2C2S Command and Control on the move

# Contingency Force Strategy

## (Con't) Framework

10 MTN



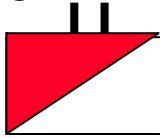
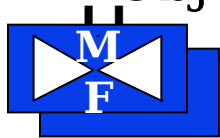
82 ABN



2 ACR



Objective



16 RAH-66

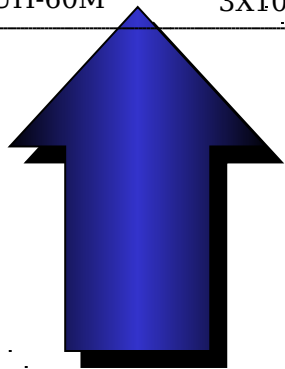
20 UH-60M

1X10 UH-60M

12 RAH-66

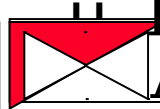
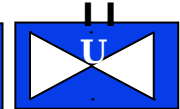
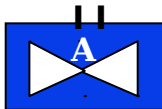
3X10 RAH-66

2 ACR



Org

Current



3x8 OH-58D

2X15 UH-60

2x8 OH-58D

3X8 OH-58D in 82nd

2 ACR

1X8 UH-60

4X8 OH-58D

1X15 UH-60

60

Recon /  
Attack

Lift:

C2:

- Tailored Forced/Early Entry Forces
- Mission - Quickly Resolve Conflict or Contain Threat
- for Follow-on Counter Offensive Ops
- Decisive Operations (Attack, Maneuver Support, AASLT)
- Digitized - Recon/Attack with Conversion to Comanche
- Deploys Primarily by Air
- Optimized for SSC/SASO
- Retains Air Assault Capability Through Transition

### RAH-66 Fielding

- Full Spectrum Capable - Modernize 82nd ABN to RAH-66 Early
- 2 ACR Transitions to Future Organization in FY04-08

- Multi-Role Platform for Recon/Attack - Limited until RAH-66 Fielding

- Sustain OH-58D (KW Not Digitized)
- Follow-On is RAH-66 & TUAV - Field Early to 82nd / 10th

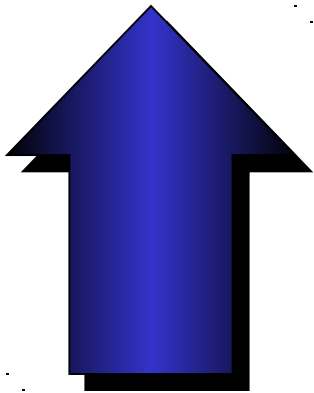
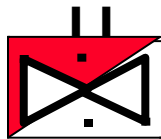
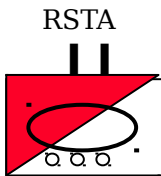
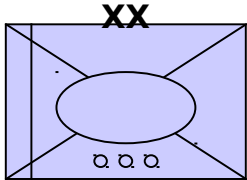
- UH-60M (Recap) for Digitization - Air Assault, Air Movement

- A2C2S Command and Control on the move

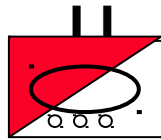
# **"Pre-Decisional"**

## **Interim Division Force Strategy** Framework

I-DIV



Near Term



RSTA  
OH-58D



Air Cav

Org:

Recon /  
Attack:

Lift:

C2:

- Optimized for SSC Offensive Operations
- SSC:
  - Offensive Operations in Close, Complex Terrain
  - Defensive Operations - Area and Mobile
- MTW:
  - Follow and Support/Assume
  - Augment from Corps for Shaping and Decisive OPS
- Digitized - Limited Air Capability Until Fielded w/Comanche
- Deploys By Air
- Division Decisive Force is Combination of BCT, AVN, & Fire Support

- **Multi-Functional Units with Legacy Equipment**
- **Full Spectrum Capable**

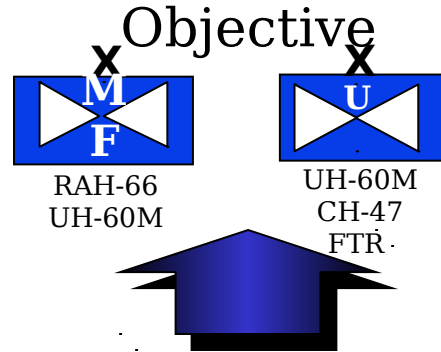
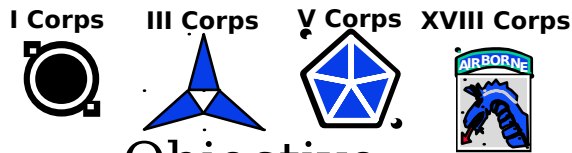
- Multi-Role Platform for Recon/Attack - Field with RAH-66 Early
- Sustain OH-58D (KW Not Digitized) Accept Risk Until Comanche

- UH-60M (Recap) for Digitization - Variety of Lift Missions

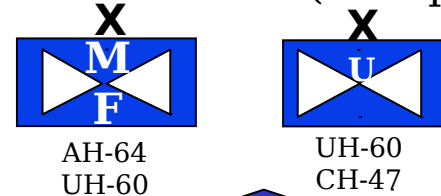
- A2C2S Command and Control on the move

# Corps Strategy

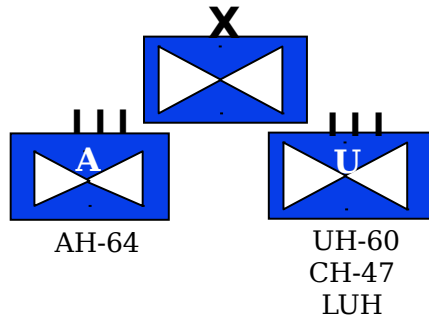
## Framework



Transition (Except III Corps)



Current



Org:

Recon:

Attack:

Lift:

C2:

- Tailored Regional Engagement in Austere Conditions
- Warfighter/Force Provider
- Decisive Operations (Attack, Deep Ops)
- Sustainment Operations (Corps to Division)
- Large AOR
- Digitized (FDC By FY 05)
- Deploy By Sea and Air
- Optimized for MTW

- III Corps Retain ARI Structure Until Divisions Transform to OBJ Force
  - Avn Units Forward Deployed to Korea
- I/V/XVIII Corps Early Transition to Multi-Functional Units with Legacy

- AH-64 Retains Recon Role during Transition
- Follow-On is RAH-66 & TUAV/Armed UAV

- Upgrade to AH-64D, Retain Operational and Tactical Deep Capability
- Assume Risk by Reduction of AH-64 in Corps (Except III)
- UH-60M (Recap) for Digitization - Variety of Lift Missions, Augment Div
- CH-47D Remains Medium Lift Capability With Upgrade
- A2C2S Command and Control on the move



# National Guard Division Strategy

## Framework

- Full Spectrum Focus, Trained and Equipped for Rotation, Augmentation, Reinforcement and Backfill
- Completes Objective Force Conversion in 2027 / First Objective Force in 2017
- Current Risk is Lack of Modernized AVN Systems in 8 DIV
- Must Support State Mission
- Two Divisions will Convert under ADRS NLT FY 12
- Deploys By Air/Sea

- Multi-Functional Units with Legacy Equipment at Reduced Numbers
- Full Spectrum Capable

- Sustain OH-58D (Not Digitized)
- Follow-On is RAH-66 & TUAV or AH-64
- Field RAH-66 as Conversion to OBJ Force

- UH-60 Sustainment, Recap, Long Term Shortage
- CH-47 Majority of Heavy Lift in RC Component - Must Reconcile Unit Size

- A2C2S Command and Control on the move

Org:

Recon /  
Attack:

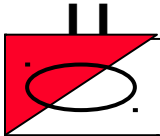
Lift:

C2:

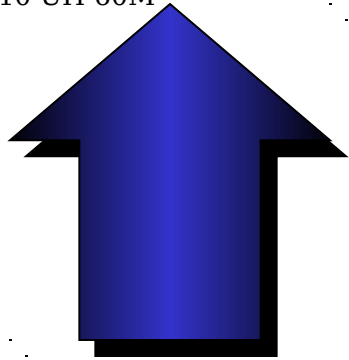
Near Term



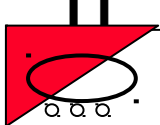
16 RAH-66  
10 UH-60M



12 RAH-66



12 AH-64  
8 UH-60



8 OH-58C

## **Decision #3**

### ***Approve the Aviation Transformation Strategy and the Development of an Implementation Plan***

- **Retains Warfighting Capability during the transitional period.**
- **Sets the Conditions Across DOTLMS for Conversion to Objective Force**
- **Meets the Operational Requirements of the Legacy Force and Interim Division**
- **Reduces Risk by Increasing National Guard Relevancy**
- **~~Postures Aviation For Army Transformation Timeline~~**

**Recommendation: Approve the  
Aviation Transformation  
Strategy and the Development  
of an Implementation Plan**